CC Pilot™ XLII

User Manual and Reference Handbook for the CC Pilot™ Model XLII

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CC Pilot™ XL

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CC Pilot™ XLII

Introduction

In this user manual and reference handbook you, as a user, a reseller or system integrator, will find important information about the CC Pilot™ XLII. The handbook will guide you and broaden your knowledge about this onboard computer's technical possibilities and advantages. Described herein are the possibilities which can be obtained using CC Pilot™ XLII in its standard configuration, but we also want to raise your awareness of the possibility we have to offer specific customized solutions within the framework of the platform on which CC Pilot™ XLII is built.

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Identification

There is a brand label on the back of the display and PC-unit of CC Pilot™ XLII. On the brand label there are numbers which identify your unique computer. During service and other contact with the supplier it is important to be able to provide these numbers.

Care

During welding or other service, on the vehicle or machine where the CC Pilot™ XLII is installed, which can damage your CC Pilot™ XLII, all cables shall be disconnected from you computer before such work begins.

The CC Pilot™ XLII shall only be mounted and serviced by authorised personnel. If the unit is opened by unauthorised personnel, the normal guarantee will cease to be valid.

Scratches, or in the worst case damages, to the display occur easily if it comes in contact with a sharp edge or hard material. In order to increase the longevity of the screen, this is naturally something which should be avoided.

The unit can be damaged if it becomes too hot. Therefore, do not cover the unit by laying things on it, like for example, hanging a jacket or other clothes on it.

Consider traffic safety when the CC Pilot™ XLII is installed and whenever it is used. CC Systems AB does not recommend that CC Pilot™ XLII or its accessories be used actively by the driver when a risk of injury to people, or damage to property, is present.

Be advised that CC Pilot™ XLII draws power from the vehicle battery. This can result in the inability of the vehicle to start if the onboard computer has been on for a period of time without the vehicle motor running.

Environment and Environmental Tolerance

The CC Pilot™ XLII has been designed to cope with tough environmental demands. Strict tests have been conducted on the unit in order to ensure that it fulfils the expectations of a rugged unit. Much work has been performed to choose and design internal components so that they, under all circumstances and in the best possible way, provide you with a dependable and user-friendly working instrument. In the section Specifications, a list of standards can be found according to which the CC Pilot™ XLII has been tested and approved.

The CC Pilot™ XLII shall preferably be placed under a roof in order to prevent exposure to direct water contact. It is also important that it is mounted securely on a stand or the like to inhibit the unit from moving and thereby becoming damaged, damaging the vehicle and/or people during, for example, a traffic accident.

Cleaning

To ensure proper and reliable functionality over time, the unit shall be wiped cleaned of dirt and dust. Use a suitable light damp rag to clean the unit.

Never use alkaline, alcoholic or other chemicals for cleaning which can damage the unit.

CC Pilot™ XLII

Overview

The CC Pilot™ XLII is a compact, robust and versatile onboard computer. It is equipped with, among other things, a pressure-sensitive touch screen as well as a large number of connection alternatives such as CAN, COM, Ethernet and USB.

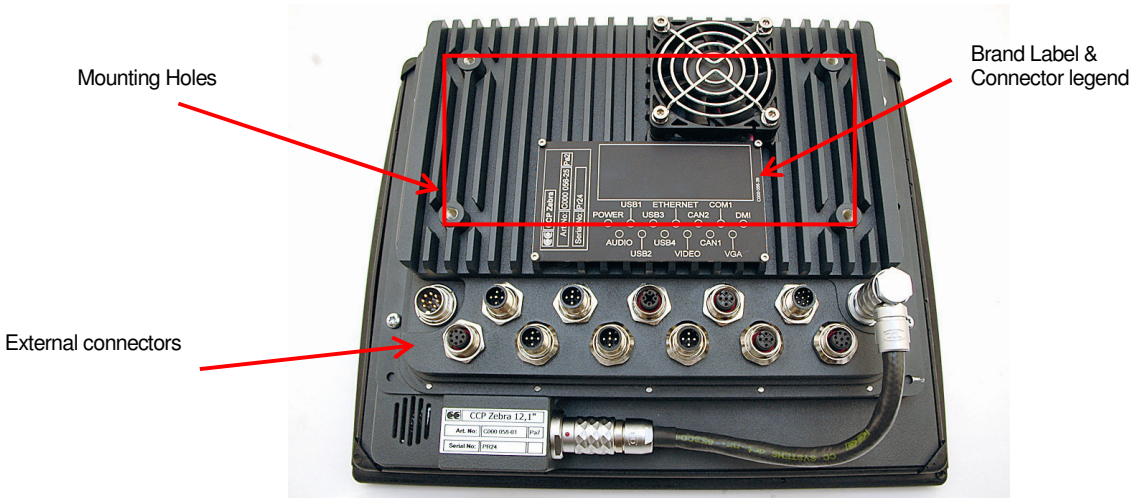
The CC Pilot™ XLII can be delivered in several configurations. This manual will cover the basic configuration.

CC Pilot™ XLII – Display unit

On the display unit of the CC Pilot™ XLII there are the touch screen, buttons for adjusting the screens brightness level, a status indicator and a light sensor to aid in adapting the screen's brightness level.

CC Pilot™ XLII – PC unit

CC Pilot™ also consists of a PC-unit which contains a hard disk and processor. It also provides easily accessible external connectors.



Connecting the Display to the PC unit

The display unit is connected to the PC unit with a (DMI) cable. The units can be mounted separately or, if combined with a 12.1" display, as an integrated unit, as shown in the illustration below.. The PC unit can also be adjusted to work without the display unit.

Connectors

The connectors on the CC Pilot™ XLII are M12 connectors, except from the display and power supply connectors. To be able to use connectors from standard peripherals, adapter cables are available. For more information about see the chapter External interface description. For more information on installing and setting up CC Pilot™ XLII see chapter Installation.

CC Pilot™ XLII

Basic operations

This section covers basic operation of the CC Pilot™ XLII unit such as start-up shut down.

Function of the Display's Push-buttons

In the top left of the CC Pilot™ XLII there are two to control the screen brightness. Press and hold the button to gradually increase or decrease the display's brightness.

Starting Up

The unit is started by sending a singnal to the ON/OFF pins using the turn key functionality controlled from the power connector on CC Pilot™ XLII. For more information see the chapter Hook up of Power Supply.

Starting in the cold

Your CC Pilot™ will not start immediately when the ON/OFF button is pressed and the temperature is lower than +5°C (+41°F). An internal heating source will warm up the system, if this is the case, the diode on the display's ON/OFF button will flash while it is warming up.

Once a safe operational temperature for the hard disk and internal electronics is reached, the CC Pilot™ will start automatically, providing that the ON/OFF button initiated the heating process.

Shutting-Down

To ensure that data does not get lost or the hard disk become corrupt, it is recommended that all programs are closed before the unit is shut down.

CC Pilot™ XLII can be shut down either from the operative system or from a signal on the ON/OFF input in the power connector.

Forced Shut Down

Setting the turn key signal high for 20 seconds will perform a forced shut down off the onboard computer. This forced shut down is a direct shut down of the computer without the control of the the operative system.

⚠ **Note that any information which was not saved will now be lost.**

Touch screen

The CC Pilot™ XLII can as an option be fitted with a touch screen which gives the opportunity to provide a very easy-to-use HMI (Human Machine Interface) for the user.

Double and right click on the touch screen

To perform the equivalent to a right click on the touch screen first tap the place where the right click is supposed to be pressed and then tap the screen again slightly to the side of the initial tap.

To perform a double click on the touch screen, tap the screen twice in the same place.

Calibration of touch screen

If needed the touch screen can be calibrated, Calibration is started manually via the XL settings application.

Be thorough with this calibration so that your touch screen will have the best possible performance. You should use the same object (finger, stylus) during calibration which you think you will use later.

⚠ **Don't use sharp or pointed objects on the touch screen since these can damage or scratch it, which can seriously degrade its functionality.**

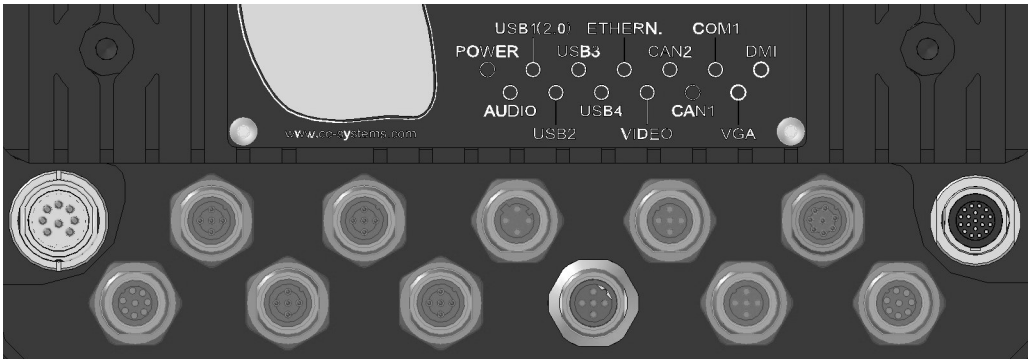
CC Pilot™ XLII

External interface description

Accessible on the rear of CC Pilot™ XLII, there are a number of ports to connect various peripheral equipments. In order to give the CC Pilot™ XLII its high environmental classification, the unit is equipped with DIN M12 connectors. CC Systems AB provides adapter cables which convert from DIN M12 to standard connectors.

⚠ **Use caution when plugging/unplugging connectors. If the pins become bent or damaged they may not function correctly, or in the worst case, the onboard computer or other equipment may be damaged.**

The connector legend describes where the connectors are located on your unit. The connectors available is dependent on the unit's configuration, therefore connections can be addressed which may not be available to your unit

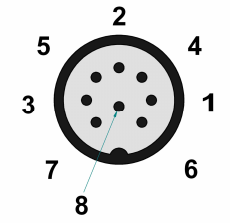


Position	Description
X1	Power Supply
X2	USB 1
X3	USB 3
X4	Ethernet
X5	CAN 2
X6	COM
X7	DMI
X8	Audio
X9	USB 2
X10	USB 4
X11	Video In
X12	CAN 1
X13	VGA out

⚠ **Notice that the following connector descriptions are those which are located on the unit, not those that the attached cables shall have in order to mate with them.**

Power Supply Connector

Marking: POWER IN
Connector Type: Serial 723 8 Pin, male



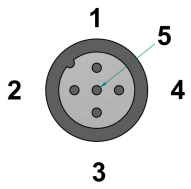
Pin	Signal	Description	Comments
1	NC		Not connected
2	Don	PC on	6-36 V = PC on
3	Dpow	Unswitched power	
4	Preheating		Signal to starts preheating of HD and display
5	Don	PC on	6-36 V = PC on
6	GND	Ground	
7	Dpow	Unswitched power	
8	GND	Ground	

The CC Pilot™ XLII power supply can range from 8 – 36 volts. If the power supply voltage goes beyond this range, the unit shuts down. In order to ensure stable operation with tolerance against temporary supply disruptions, the supply voltage should be at least 12 V.

⚠ **For complete hook up instructions, see the section entitled Installation.**

USB (USB 1, USB 2, USB 3, USB 4)

Marking: X2 USB 1, X3 USB 2, X9 USB 3 and X10 USB 4
Connector Type: DIN M12, 5-pole, A-coded, male



Pin	Signal	Description	Comments
1	Vbus	Power to external USB-unit	5 Volt, max 2A for USB 1 and max 500 mA for USB 2-4. Internal over current and shortcut protected.
2	D-	Data	
3	D+	Data	
4	Shield	Cable shield	
5	GND	Ground reference	

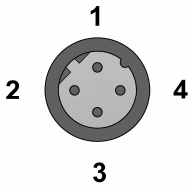
Via the USB port, you can connect a multitude of devices to the CC Pilot™ XLII. For some devices, drivers compatible with the operating system are required to be installed in order for the device to function.

The USB ports follow the USB 2.0 standard. Due to data communication safety in rough environments three of the four available USB connectors is limited to full speed (up to 12 Mbps). If high speed is necessary (up to 480 Mbps) the device must be connected to the USB connector X1.

USB connector 1 can supply up to 2A, USB 2-4 can supply up to 500mA each. The total current of all USB ports 1-4 has a max of 2A. The USB ports are internal over current and shortcut protected.

Ethernet (Ethernet)

Marking: X4 Ethernet
Connector Type: DIN M12 4-pole, D-coded, female



Pin	Signal	Description	Comments
1	TX+		
2	RX+		
3	TX-		
4	RX-		

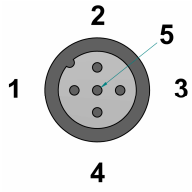
With an Ethernet connection, the CC Pilot™ XLII can access other units and networks. The Ethernet connector support 10/100 Mbps, i.e. communication speed up to 100 Mbps.

If shielded Ethernet cable is used the cable shield is connected to the M12 connectors cover.

⚠ **Be aware that connecting CC Pilot™ XLII to a network environment can impose a security threat.**

CAN (CAN1, CAN2)

Marking: X5 CAN 2 and X12 CAN 1
Connector Type: DIN M12, 5-pole A-coded, female



Pin	Signal	Description	Comments
1	CAN1 SHLD		
2	NC	No connection	
3	CAN GND		
4	CAN1 H	CAN1 High	
5	CAN1 L	CAN1 Low	

It is possible to connect two CAN-channels to the CC Pilot™ XLII to connect a control system or, for example, the FMS system in a vehicle.

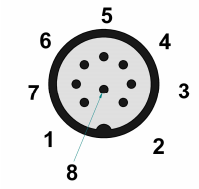
The interface has a PCA82C251 high speed transceiver installed and follows the ISO 11898-24V standard. There is no termination in the interface; therefore, this shall be present in the cable.

Pinning of the CAN connector is according to the CANopen standard. The CAN connectors do not provide power out to external units.

CC Systems AB is well-experienced with control via the CAN-interface and both software and drivers are tested in various environments and under different conditions. Contact CC Systems AB if you need more information about our CAN-solutions.

COM

Marking: X6 COM
Connector Type: DIN M12, 8-pole, A-coded, male.



Pin	Signal	Description	Comments
1	DCD	Data Carrier De-	
2	RxD	Receive data	
3	TxD	Transmit data	
4	DTR	Data Terminal	
5	GND	Signal reference	
6	DSR	Data Set Ready	
7	RTS	Request To Send	
8	CTS	Clear To Send	

The COM port follows the RS232 standard except for the “Ring Indicator” signal, wish has been omitted. The supported communication speed for these ports is 2.4 to 115.2 kbps.

An eventual cable shield is connected to the M12 connectors cover.

DMI

Marking: X7 DMI
Connector Type: DIN M12, 8-pole, A-coded, male.

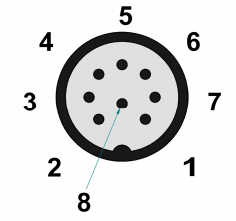
Pin	Signal	Description	Comments
1	TXOUT0-	LVDS	
2	TXOUT0+	LVDS	
3	TXOUT1-	LVDS	
4	TXOUT1+	LVDS	
5	TXOUT2-	LVDS	
6	TXOUT2+	LVDS	
7	TXCLK-	LVDS	
8	TXCLK+	LVDS	
9	DMI power	+24 V	
10	TFT_ON	TFT power control	
11	Beeper	Simple sound unit	
12	TS_Tx	Touch screen Tx	
13	TS_Rx	Touch screen Rx	
14	SPI_MISO	SPI data Display-PC	
15	RESET AVR	Reset input to AVR	Low in, while programming AVR. No connection in the cable
16	SPI_MOSI	SPI data Display-PC	
17	SPI_CLK	SPI clock Display-PC	
18	ON_OFF_2	On/off button from	
19	GND	Ground reference	

The DMI cable handles display and control signals between the CC Pilot™ XLII Display and PC-unit. The maximum recommended DMI cable length is 5.5 m.

Outer cable shield and LCDS double-shield is connected to the connector cover.

Audio

Marking: X8 Audio
Connector Type: DIN M12, 8-pole, A-coded, female.



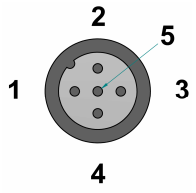
Pin	Signal	Description	Comments
1	Line out L		
2	Line out R		
3	GND (Speaker)		Shield in cable
4	Microphone		
5	GND (Microphone)		Shield in cable
6	Speaker output L		Amplified
7	Speaker output R		Amplified
8	GND (Line out)		Shield in cable

The audio offers possibilities to play everything from warning sounds to music directly from CC Pilot™ XLII two channel speaker stereo output. The output offers both line out signal and amplified speaker out. Microphone in is also available for sound recording or to present the sound from, for example, cameras.

Volume is set by the volume controls within Windows.

Video In (Video1, Video2)

Marking: X11 VIDEO
Connector Type: DIN M12, 5-pole, B-coded, male.



Pin	Signal	Description	Comments
1	GND	GND Video A	
2	Video A	PAL/NTSC input	
3	Video B	PAL/NTSC input	
4	12V_OUT	Power out +12 V	Power supply to video camera, Max 300 mA
5	GND	GND Video B	

The Video connector has two composite video inputs for the attachment of video sources such as rear view cameras. It supports PAL, the European video format, as well as NTSC-, the American standard.

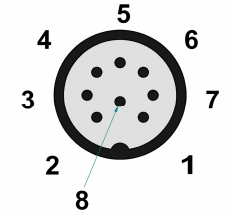
The video connector can be used to power external using the 12V unfiltered supply. The output has a current limit that depends on the internal unit temperature. The current is limited to 0.150A at an internal unit temperature of 70 degrees Celsius and around 0.2A in normal working conditions.

The cable which is used to connect the camera to the computer shall be a 75-Ω coaxial cable, e.g. M17/94-RG179. An eventual outer cable shield is connected to the M12 connectors cover.

⚠ **Ensure that there is no DC-offset (supply current) on the video signal connected since this can cause damage to your CC Pilot™ XLII.**

VGA Out

Marking: X13 VGA
Connector Type: DIN M12, 8-pole, A-coded, female.



Pin	Signal	Description	Comments
1	VGA R	VGA Red	
2	VGA G	VGA Green	
3	VGA B	VGA Blue	
4	H Sync	Horizontal Sync	
5	V Sync	Vertical Sync	
6	GND R	Ground reference Red	Shield on VGA Red cable
7	GND G	Ground reference Green	Shield on VGA Green cable
8	GND B	Ground reference Blue	Shield on VGA Blue cable

The VGA out can be used as external displays to the CC Pilot™ XLII PC unit, either as a stand alone head display or as dual display together with the CC Pilot™ XLII display.

Outer cable shield is connected to the cable connector cover.

CC Pilot™ XLII

Installation

Your CC Pilot™ XLII must be installed in such a way that the unit is not exposed to any unnecessary stress or present any traffic danger. In this section, some recommendations are made regarding methods for how the unit should be installed. For information about mounting accessories please contact your CC Pilot™ XLII reseller.

⚠ **CC Pilot™ XLII shall only be installed and serviced by authorized personnel. If the unit is opened by non-authorised personnel, the warranty becomes void.**

For the warranty to be valid, the installation of the CC Pilot™ XLII must be approved by CC Systems AB. This is done through an "Application Approval"; contact CC Systems AB for more information.

Placing and installing of the unit and peripherals

The CC Pilot™ XLII shall be installed in a ventilated space where air is able to circulate around the unit, therefore not near hot air vents or the like. There must be at least 50 mm distance between the unit and the closest partition or any other barrier. If the unit becomes too warm, it may not perform to its full capacity and, with high temperature, cease to function.

⚠ **If the preceding instructions are not observed, the cooling of the unit can be degraded which can lead to overheating, consequently causing permanent damage to the unit.**

When the CC Pilot™ XLII or any device is installed in a vehicle environment it is important that the installation is traffic-safe. One should also avoid installing the unit where it will block the driver's view. This applies to both the instrument panel and the view through windshield. One should also think about how the placement affects personal safety in the event of a collision.

⚠ **Consider traffic safety whenever the CC Pilot™ XLII is installed and used in vehicle installations. CC Systems AB does not recommend that the CC Pilot™ XLII or its accessories are used actively by the driver or operator when a risk of injury to people, or damage to property, is present.**

Mounting the PC unit separately

The PC unit should be fastened onto suitable panelling in the cabin or some place similar. This is done with the six mounting holes on the sides of the unit. Suitable fasteners, such as MRT M4x25 or MC6S M4x25 screws, can be used. The maximum tightening torque allowed is 1.0 Nm. If the surface, on which the PC unit should be fastened, is not flat, care must be taken so as not to put mechanical tension on the unit during fastening. This can appropriately be solved by placing suitable spacers between the PC unit and the surface it is to be fastened on. An alternative solution is to use a separate, flat mounting plate for the PC unit. This plate is first fastened onto the desired area with separate screws, or by other means. Use thread lockers in all screw holes, e.g., Loctite 222.

⚠ **We recommend installing CC Pilot™ XLII in such a way that it is not exposed to unnecessarily vibration or other stress.**

Mounting the display

Bracket mount

The CC Pilot™ XLII is preferably mounted on a convenient bracket which allows for adjustment of the display's position and angle. The bracket should have, or be provided with, a flat fastening plate to which the unit is bolted. The 10.4" display has mounting holes according to VESA 75 and the 12.1" display is according to VESA 100, depending on display size). To fasten, use appropriate M6 cap screw of type MC6S (Allen) or MRT (Torx). Note that the enclosure has blind holes, which give a maximum thread depth in the enclosure of 6.5 mm. The maximum torque is 2.5 Nm. Apply a thread locker in all bolt holes, e.g. Loctite 222.

Panel Mount

With a front-mounted installation, use the rubber mask as a seal against the panel plate. The unit is locked down by applying clamps which are either fixed to the panel (recommended) or fixed to the unit through holes for VESA installation.

Integrated installation, PC unit mounted on display unit

An integrated installation can only be carried out on the PC unit together with a 12.1" display unit.

The same placing demands apply here, as when the units are mounted separately. Mounting, however, is carried out somewhat differently.

To fasten the PC and display units together, screws of type MC6S (Insex) or MRT (Torx), M4 x 25, should be used. The maximum tightening torque allowed is 1.0 Nm. Use thread lockers in all screw holes, e.g., Loctite 222.

The mounting holes on the PC unit's cooling flanges, are used to screw the integrated unit onto a flat mounting plate. The mounting holes have M6 dimensions and are blind holes with a depth of 10 mm. Use screws of the correct length so that they do not hit the bottom of the mounting holes, and always use thread lockers in all screw holes, e.g., Loctite 222. Maximum tightening torque allowed is 9.8 Nm.

⚠ **Note that the mounting plate, which is screwed onto the cooling flanges, should not cover a large area. This may cause poor cooling of the computer and damage it permanently.**

⚠ **If the screws used in the mounting holes hit the bottom, it may cause damage to the unit's enclosure.**

Mounting Cables

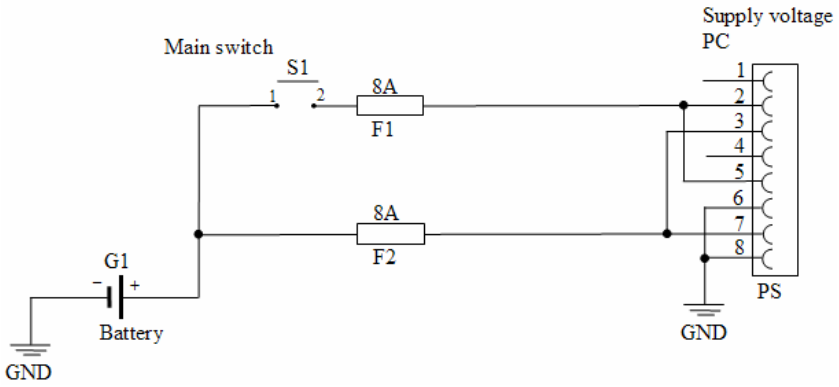
Cables shall be installed so that they don't run the risk of being damaged, pinched or worn. Avoid bending and twisting cables. Strain-relief on cable assemblies shall be arranged near the connection to the respective unit. The connectors shall always be screwed-in securely to give good contact and avoid unnecessary strain.

Through adapter cables, as supplied by CC Systems AB, standard connectors for Ethernet, USB and COM can be connected to the unit. The hook up of these adapter cables can and should be placed in a moisture-free, hidden space and should be secured and strain-relived.

Hook up of Power Supply

This instruction addressed vehicle installations but the principle is the same also for other types of installations. See also the description of the pin outs for the Power Supply Connector under the section External interface description.

Carefully follow the connection instructions below. Make sure that the contacts are the right way up and that they do not have to be forced, but lock gently and pliant.



GND is connected to the vehicle's ground.

ON/OFF (pins 2 and 5) i.e. the computer's ON/OFF signal is connected through an 8A fuse (F1) to the battery. If the vehicle has a main switch (S1), then the on-board computer should be connected after this switch, i.e. point 2 at the main switch (S1), see above figure.

Battery (pins 3 and 7), i.e. the computer's power supply (+28 VDC), should be connected directly to the vehicle's battery (G1) through an 8A fuse (F2). If the vehicle has a main switch then the on-board computer is preferably connected before the switch, see above figure.

Preheating (pin 4) allows preheating, of the TFT element and hard disk.

By connecting the power supply according to above, the on-board computer will start by a signal on the ON/OFF pins, equal to a push button operation. To shut down the CC Pilot™, send a new signal on the ON/OFF pins.

⚠ **NB! The on-board computer should not be connected so that it is turned on and off using the ignition key, as this leads to the computer re-starting at an engine failure, for example.**

The power supply cable assembly's wires, which are delivered by CC Systems AB, are colour marked according to the table below.

Pin	Signal	Colour marking
1	Not Connected	-
2	ON/OFF (+28 VDC)	Yellow
3	Battery (+28 VDC)	Pink
4	Preheating (+5 – +32 VDC)	Green
5	ON/OFF (+28 VDC)	White
6	GND	Blue
7	Battery (+28 VDC)	Grey
8	GND	Brown

Heating via Preheating

The power supply contact on your CC Pilot™ XLII has a pin which can be used to initiate preheating of the PC and display units. In this state, the computer will not be started when the required temperature is reached. The ON/OFF signal must be used to start the unit.

Preheating can be initiated by a signal, from an external device, e.g., timer or motor heater, into pin 4 on the power supply contact on CC Pilot™. This signal must be high during the entire Preheating phase, otherwise the preheating will discontinue. The signal can be between 5 V and 32 V and does not have to supply any particular current, as the supply current comes from the vehicle's battery.

⚠ **Note that preheating requires power from the vehicle's battery. This can result in the vehicle not starting, after prolonged preheating of the PC and display, due to a flat battery.**

CC Pilot™ XLII

Software

This section gives a short description to some of the computer specific software supplied with the CC Pilot™ XLII.

Operating System

Your CC Pilot™ XLII is by default supplied with Windows XP and the following described software tools targets Windows XP. Your CC Pilot™ XLII can also be used with other operative systems, Contact your sales representative for more information.

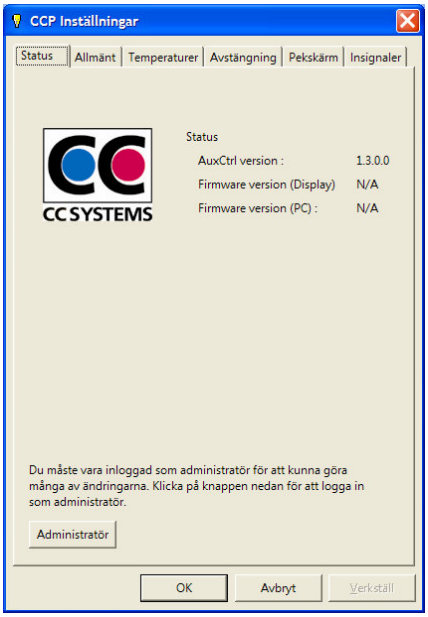
The CC Pilot™ XLII offers a multitude of connection alternatives, for instance via USB. In order for the device connected to CC Pilot™ XLII to function correctly, sometimes drivers must be installed. CC Systems AB can only guarantee the function for applications and devices which are tested and approved by CC Systems AB.

CCP settings

CCP settings is a software that used to view and configure CC Pilot™ XLII specific parameters and settings.

Open CCP Settings

CCP settings is opened either from the Control panel or from the light bulb icon located in the status notification area in the task bar.



CCP setting status

The colour of the light bulb indicates the CCP setting status.

RED – Not active. The CCP settings service is not started or something is wrong in the communication with the computer.

YELLOW – Active and waiting. The CCP settings service is in idle state.

GREEN – Busy. The CCP settings service is operating with the computer.

The Status tab

The status tab presents information about the firmware versions loaded on the unit.

The status tab also has an administrator login button. The administrator login gives authorized service personnel access to more parameters.

CC Systems does not take any responsibility for any resulting damage or injury given as a result of reconfiguring CCP settings.

The general tab

From the general tab it is possible to alter the steps for the dimming buttons. It is also possible to assign other functionality than dimming of the backlight to the dimming buttons.

The temperature tab

The temperature tab gives status information about the unit's internal temperature as well as information regarding the temperature control functions.

The shut-down tab

From the shut-down tab it is possible to configure how the computer handles shut down procedure.

The touch-screen tab

The touch-screen tab offers calibration of the touch screen functionality.

CC Pilot™ XLII

Specifications

The specification may wary depending on your computer configuration.

Computer Core

Core Component	Description	Comments
Processor	Alternative CPU-boards with performance in the range 600 MHz–1.8 GHz	Intel Pentium Mobile, 1,6 GHz default
Storage	Compact Flash (512 MB to 8 GB) or rotating hard disk (2”5, <40 GB) exchangeable via hatch on enclosure.	40 GB rotating disc default.
RAM	256 – 1024 MB SDRAM	256 MB default

PC module Interfaces

Interface	Description	Comments
CAN	2 pcs. 2.0B, ISO 11898 – 24V, 1 Mbit	
USB	4 pcs.	Ver. 2.0, 3 full speed, 1 high speed
Video in	2 pcs.	Zoomed composite video signal
RS232	1 pcs.	<= 115 000 baud
Ethernet	2 pcs.	10/100 Base-T
Touch screen	Resistive Touch screen	8-wire
Audio	Line out Speaker out Mic in	1V RMS at 10k 4W/channel at 4Ω
VGA out	1pcs	Dual screen or dual display
DMI	1 pcs	VGA out and display signals

Power Supply

Power Supply	Description	Comments
Supply Voltage	10 to 36 V	
Power Consumption	< 2A at 24 V	

Display

Display	Description	Comments
10”4	Colour, XGA, 320 cd/mm*	Aspect Ratio 4:3
12”1	Colour, XGA, 320 cd/mm*	Aspect Ratio 4:3

* Light intensity can be regulated in 32 steps manual or automatic via light sensor.

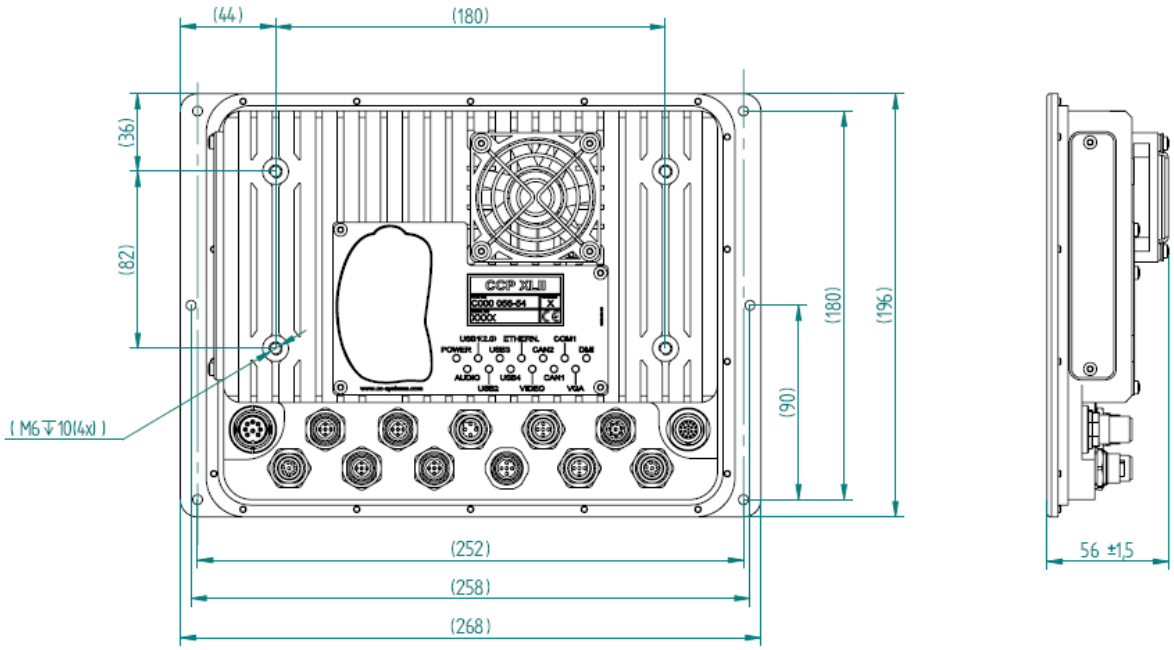
Environmental Tolerance

Environmental Test	Standard	Comments
Vibration	IEC 60068-2-64	0,01 g^2/Hz 5-200 Hz 1,39g (RMS)
Shock	IEC 60068-2-27	5 g / 30 ms 3x3x3
Dry Heat	EN 60068-2-2 Bd	Operating: +65°C, 24h Storage: +70°C, 24h
Damp Heat	EN 60068-2-30 Db	Operation: +25°C / +55°C >93% RH 2*24h (without touch screen)
Cold	EN 60068-2-1 Ad	Operating: -40°C, 24h Storage: -40°C, 24h
Enclosure	EN 60529	IP67
EMC Immunity, Transient	EN 61000-4-4 (Burst) EN 61000-4-5 (Surge)	+/- 2 kV +/- 2 kV
EMC Immunity, ESD	EN 61000-4-2	8 kV air, 6 kV contact
EMC Immunity, RF	EN 61000-4-3 EN 61000-4-6	20 V/m, 80 MHz to 2 GHz 15 V, 15 kHz to 80 MHz
EMC Emission	EN 55022 Class A	Measured from10 m Radiated: 30 to 230 MHz 40 dBµV/m 230 MHz to1 GHz 47 dBµV/m Conducted: 9 kHz to150 kHz 103-83 dBµV 150 kHz to 500 kHz 79 dBµV 500 kHz to 30 MHz 73 dBµV

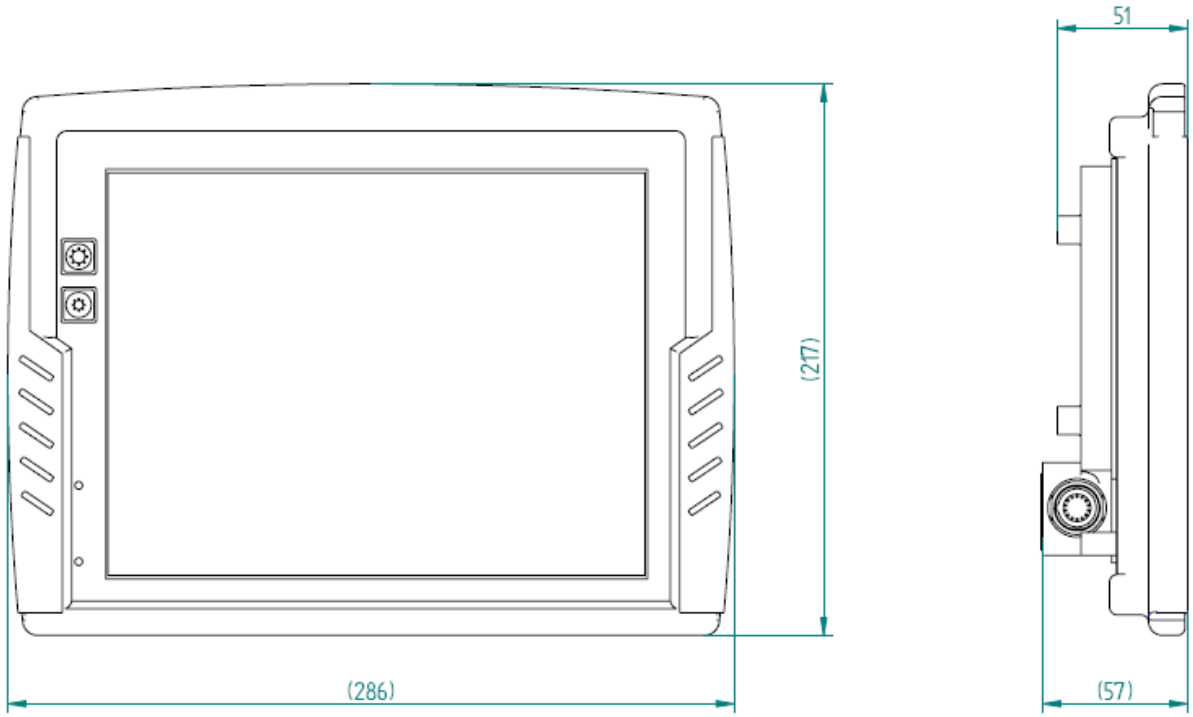
The environmental tolerance may be affected by external factors like mounting and cables etc.

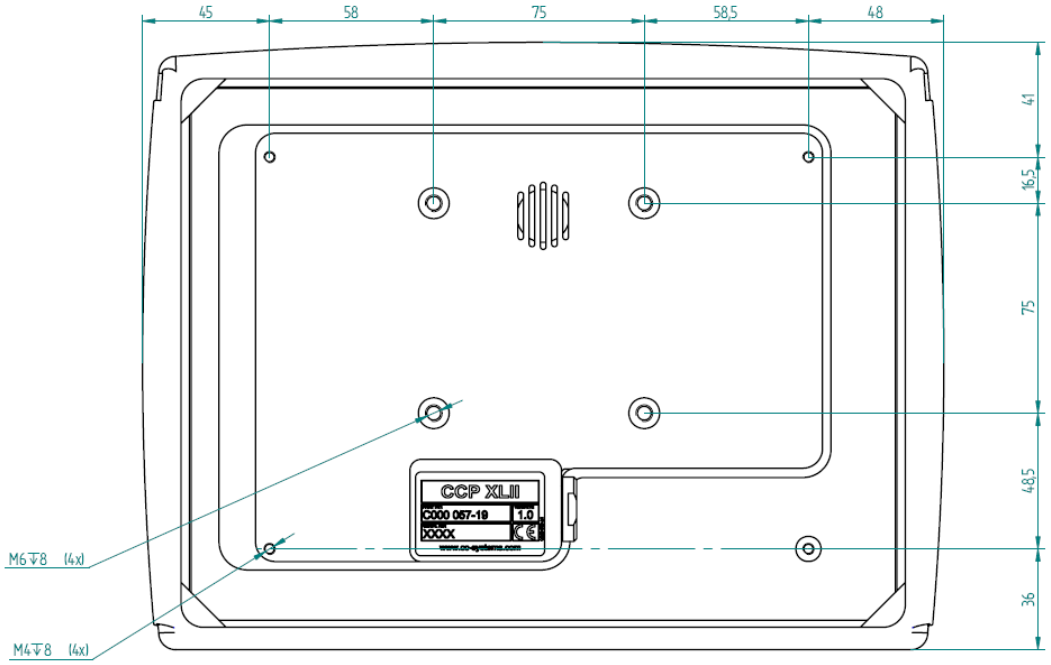
Weight and Dimensions

PC unit	Description	Comments
Enclosure size	268 x 196 x 56 mm (W x H x D)	

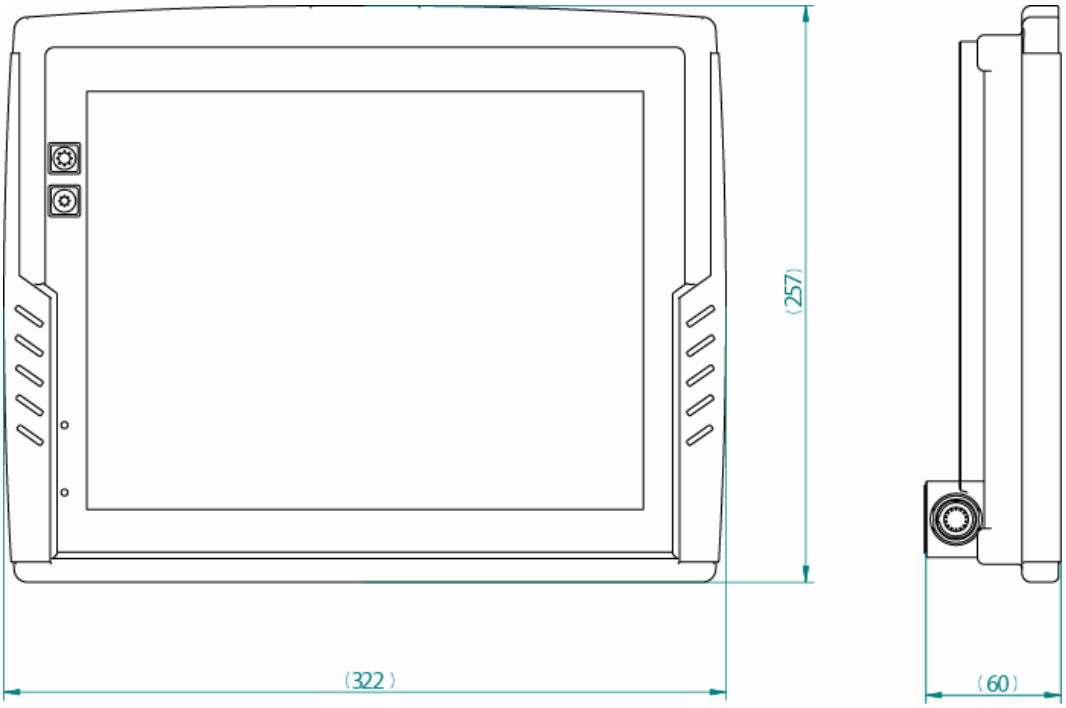


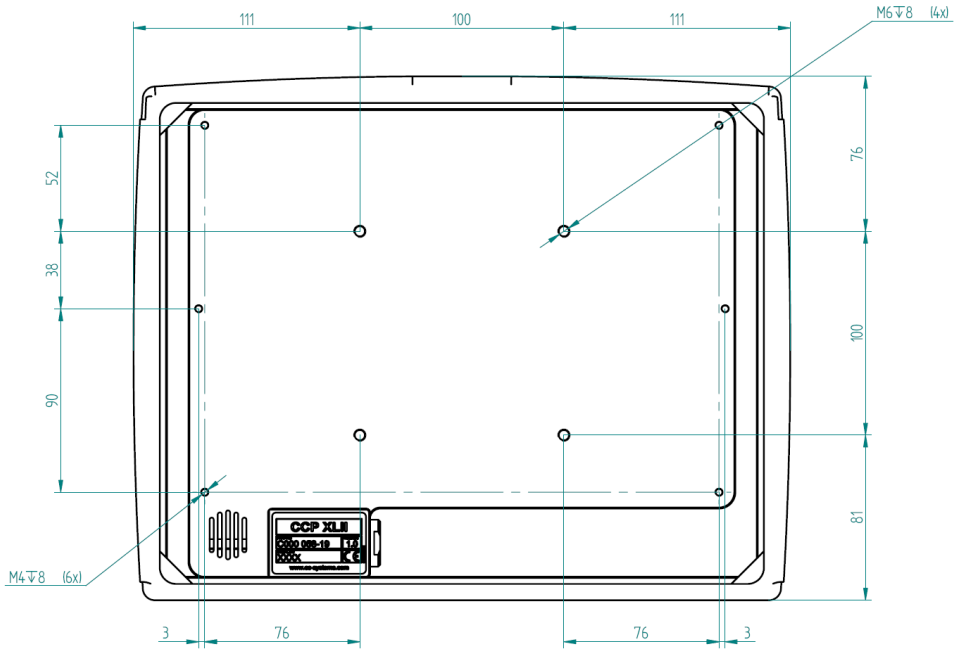
10.4” Display	Description	Comments
Enclosure size	286 x 217 x 57 mm (W x H x D)	





12” Display	Description	Comments
Enclosure size	322 x 257 x 60 mm (W x H x D)	





Contact Technical Support

Contact your reseller or supplier for help with possible problems with your CC Pilot™ XLII. Contact information is found on the last page of this handbook.

Preparation before contacting technical support

In order to get the best help, you should have your CC Pilot™ XLII in front of you and be prepared with the following information before you contact support.

- Part number and serial number of the unit, which you find on the brand label
- Date of purchase, which is found on the invoice
- The conditions and circumstances under which the problem arises
- Possible error messages which are shown.
- Version number of the operating system, which you find via the *Start* menu: go to the *Control Panel* and click on *System*.
- Information regarding possible external equipment which is connected to the CC Pilot™ XLII.

CC Pilot™ XLII

Trade Mark, etc.

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